



**Federal Aviation
Administration**

International Aircraft Materials Fire Test Forum Meeting

Short Takes and Current Projects

Presented to: International Aircraft Materials Fire Test
Forum, Mobile, Alabama

By: Tim Marker, FAA Technical Center

Date: March 10, 2020



The Ninth Triennial International Aircraft Fire and Cabin Safety Research Conference

October 28-31, 2019

Resorts Casino-Hotel, Atlantic City, New Jersey, USA



Sponsored by International Aviation Authorities

Conference Statistics

TOTAL ATTENDEES: 645



Conference Statistics

24 Countries Represented:

Australia

Austria

Belgium

Brazil

Canada

China

Czech Republic

France

Germany

Italy

Jamaica

Japan

Mexico

New Zealand

Portugal

Republic of Costa Rica

Singapore

South Africa

Switzerland

The Netherlands

Turkey

United Arab Emirates

United Kingdom

United States

Conference Statistics

Aviation Authorities:

Total FAA: 86 (Breakdown below)

FAA Technical Center: 23

FAA CAMI: 8

All Other FAA: 55

Transport Canada Civil Aviation (TCCA): 6

Civil Aviation Authority of Singapore (CAAS): 3

National Agency of Civil Aviation (ANAC): 2

Civil Aviation Bureau of Japan (JCAB): 2

European Union Aviation Safety Agency (EASA): 1

Civil Aviation Authority of Israel (CAAI): 1

Jamaica Civil Aviation Authority (JCAA): 1

South African Civil Aviation Authority (SACAA): 1

Conference Statistics

International Safety Organizations:

National Transportation Safety Board (NTSB): 4
Transportation Safety Board of Canada (TSB): 2
Australian Transport Safety Bureau (ATSB): 1

Conference Statistics

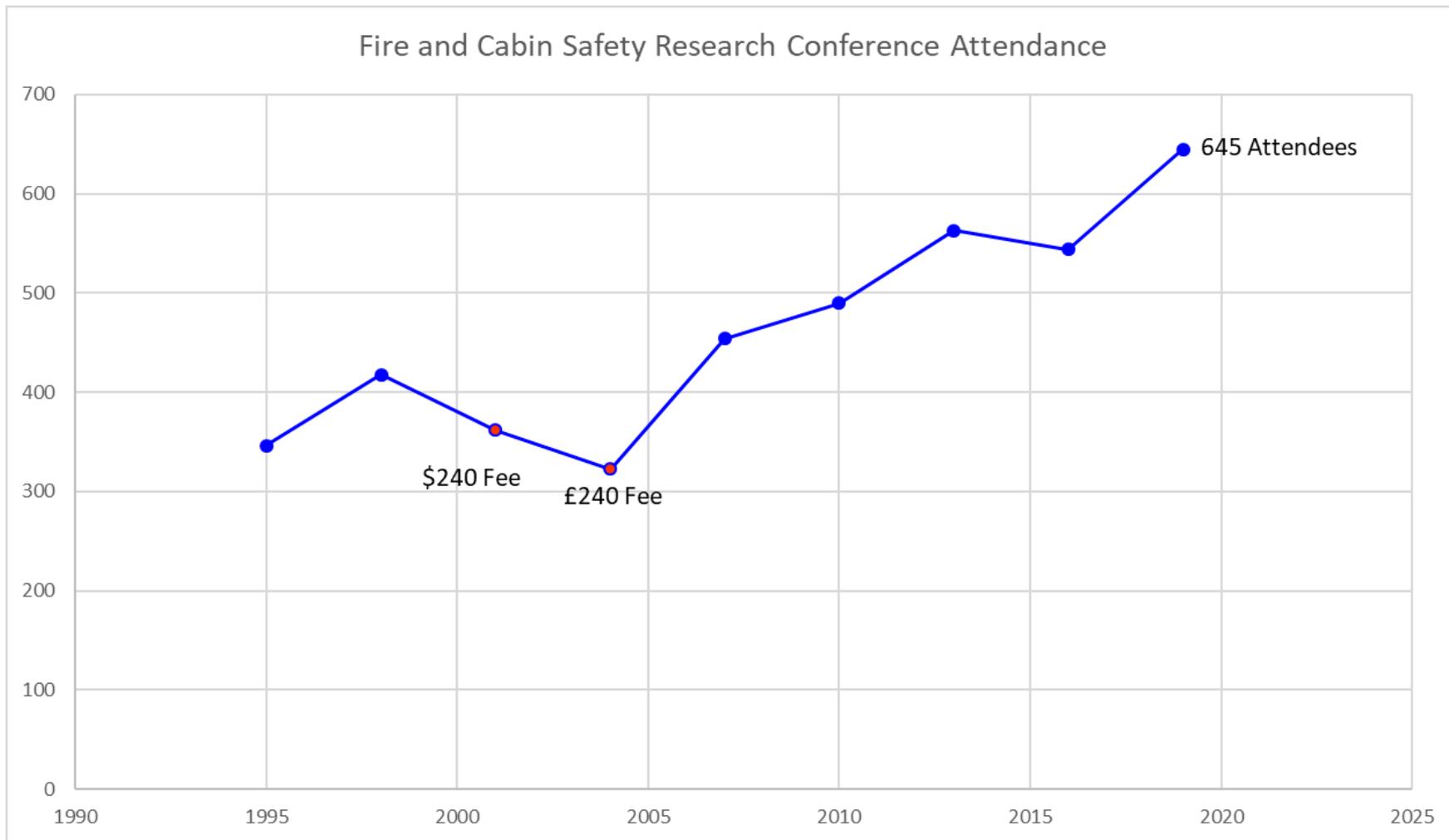
Airframe Manufacturers:

Boeing:	33
Airbus:	21
Embraer:	15
Gulfstream:	14
Bombardier:	4

Airlines:

Air Wisconsin Airlines (U.S.)
Alaska Airlines (U.S.)
American Airlines (U.S.)
KLM Royal Dutch Airlines (The Netherlands)
Southwest Airlines (U.S.)
Spirit Airlines (U.S.)
SunExpress Airlines (Turkey)
Sunwing Airlines (Canada)
Turkish Airlines (Turkey)
TAP Portugal (Portugal)

Conference Statistics



Questions on Conference?



Materials and Systems Forum Meetings

Way Forward:

3-Day Combined Meeting in Atlantic City (October)

3-Day Combined Meeting in Europe (June)

2-Day Combined Meeting in U.S. (Feb)

Materials and Systems Forum Meetings

3-Day Combined Meeting

Day 1 Materials Forum (8am to 5pm)

Day 2 Materials Forum (8am to 12pm)

Day 2 Lunch (12pm to 1pm)

Day 2 Systems Forum (1pm to 5 pm)

Day 3 Systems Forum (8am to 5 pm)

Materials and Systems Forum Meeting Questionnaire

Both the Materials and Systems Forum Meetings chaired and administered by the Federal Aviation Administration (FAA) have been free to attend. We are conducting this survey to collect feedback on the meeting venue accommodations. Please answer the following nine (9) questions as related to the FAA-host meetings in the Atlantic City Area ...

Questionnaire sent to 692

Following Data Based on 167 responses

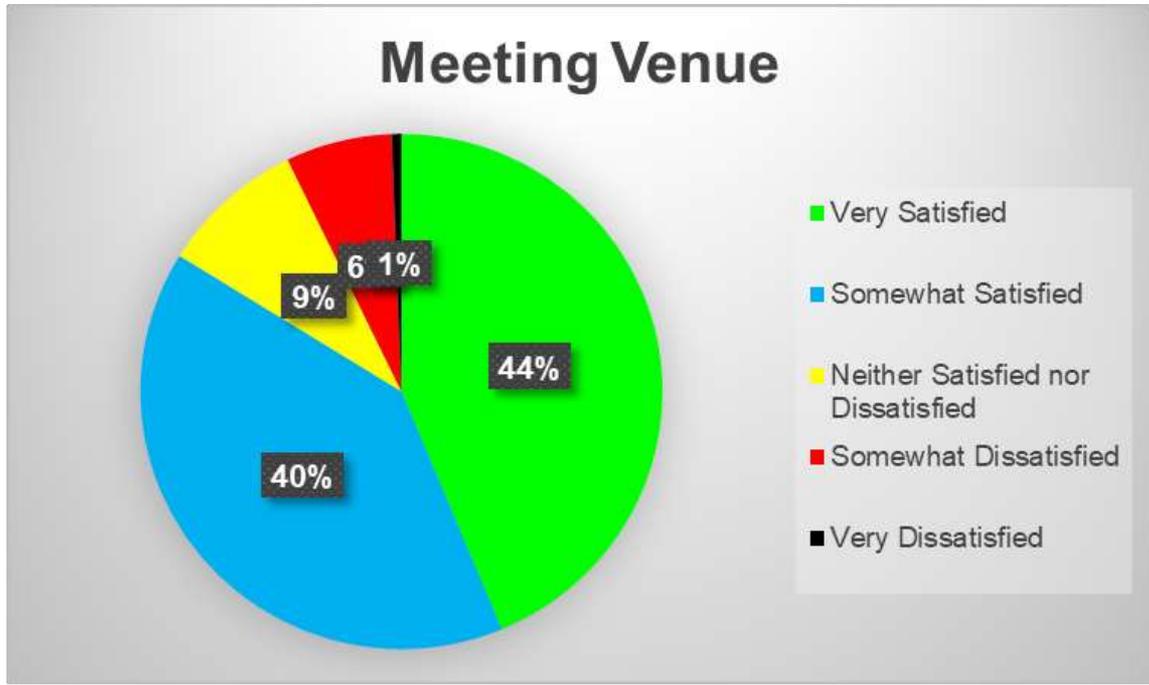
$$167 \div 692 = 24\%$$



Materials and Systems Forum Meeting Questionnaire

Question 1 (Meeting Venue)

How satisfied have you been with the meeting room accommodations selected for past meetings? Please base your rating on clarity of presentations, acoustics, comfort of seating, spaciousness, etc.



Materials and Systems Forum Meeting Questionnaire

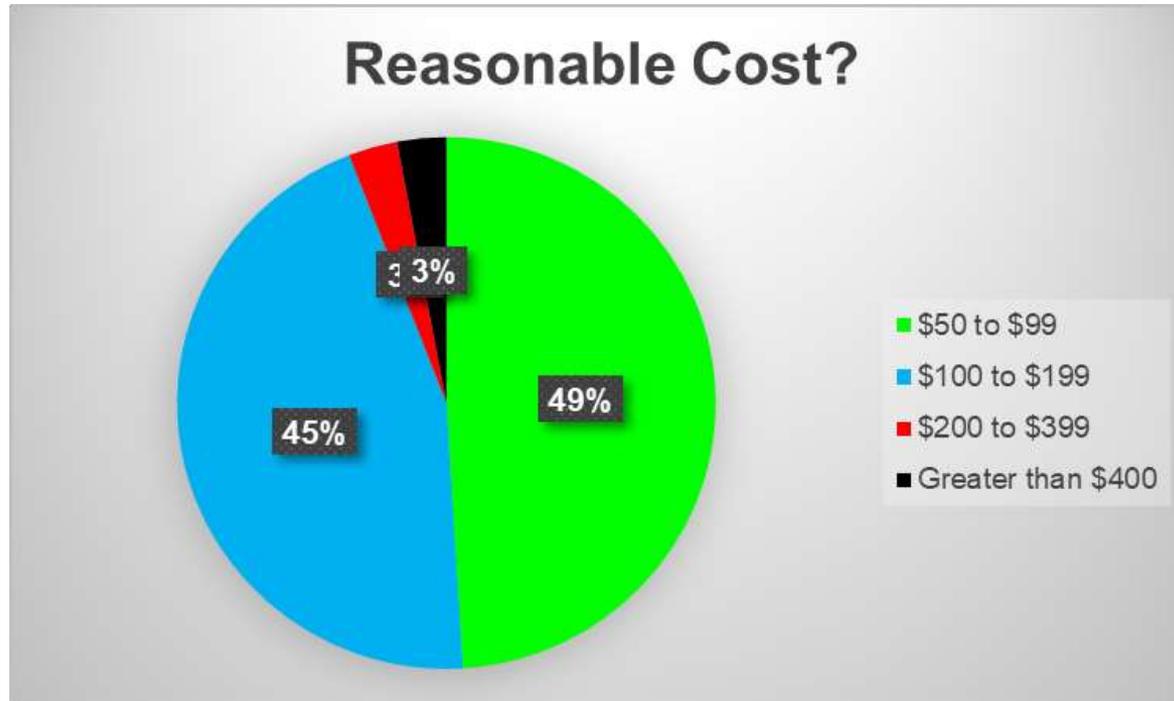
Question 2 (Fee for Meeting)

Would you consider paying a nominal fee to attend future meetings, if this would ensure a higher quality of meeting space? This may include a larger meeting room, additional monitors for viewing presentations, coffee and light refreshments, better acoustics, additional microphones for audience questions, etc.



Materials and Systems Forum Meeting Questionnaire

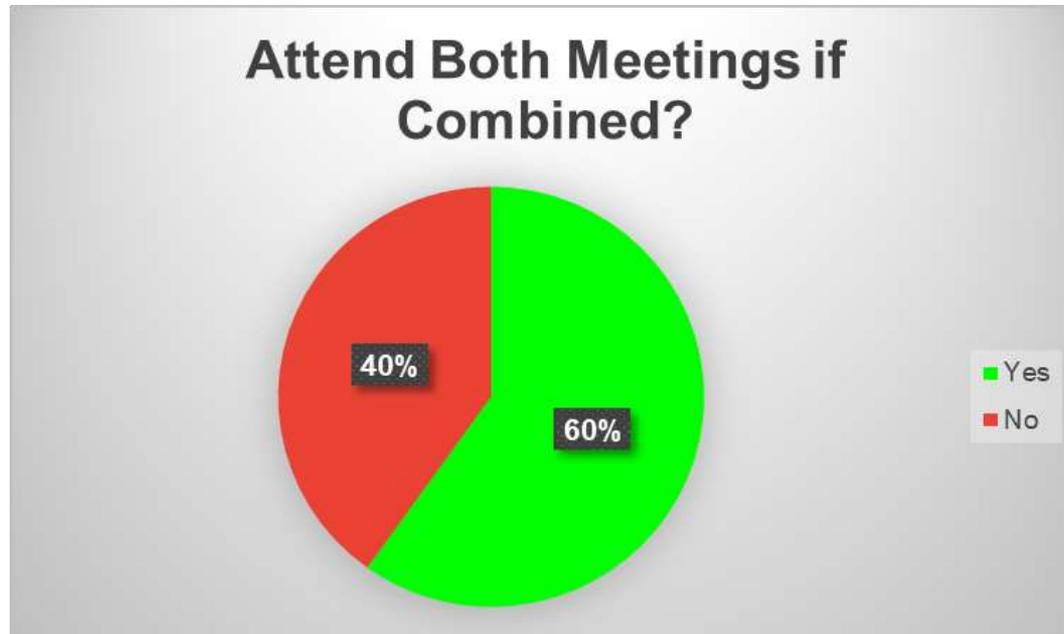
Question 3 (What is reasonable cost for Meeting fee)



Materials and Systems Forum Meeting Questionnaire

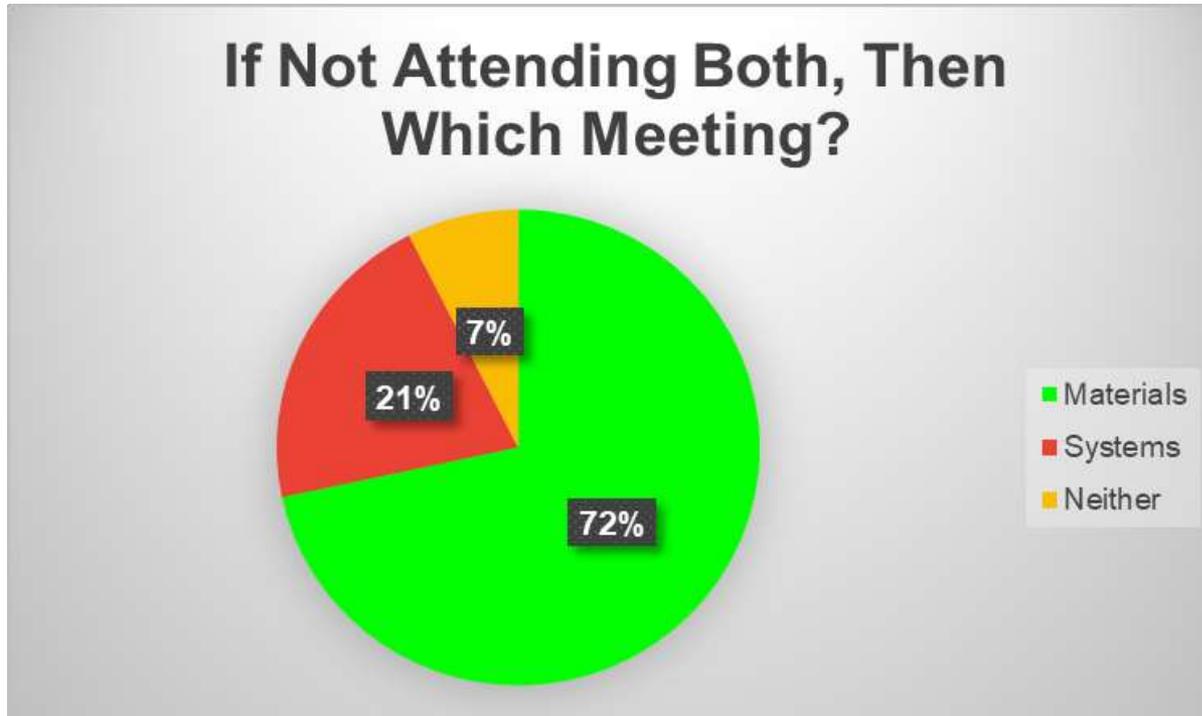
Question 4 (Would you attend a combined Materials/Systems Meeting)

In the past, the FAA has combined the Fall Materials and Systems Forum meetings, to allow participants the option of attending both meetings in one week. By minimizing travel expenses, this option has boosted the attendance of both meetings. The FAA is planning to expand this format, and combine the summer meetings in Europe as well. The planned agenda would be a 3-day event, with the Materials Forum starting on Tuesday, and finishing just prior to lunch on Wednesday. The Systems Forum would begin after lunch Wednesday, and finish after a full day on Thursday. Given this proposed format, would you attend both meetings?



Materials and Systems Forum Meeting Questionnaire

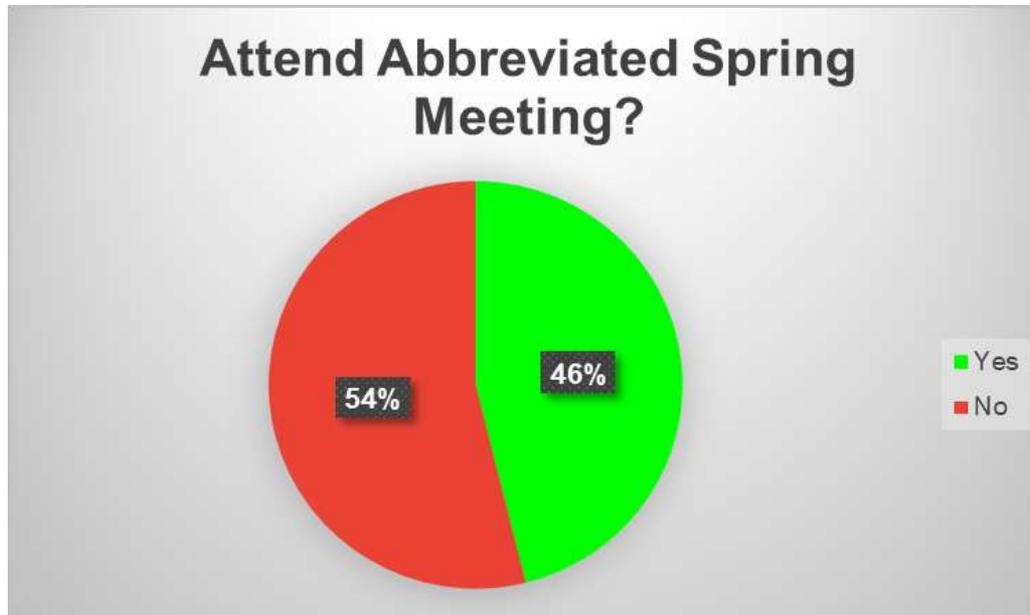
Question 4a (Which meeting if not both of combined Materials/Systems Meeting)



Materials and Systems Forum Meeting Questionnaire

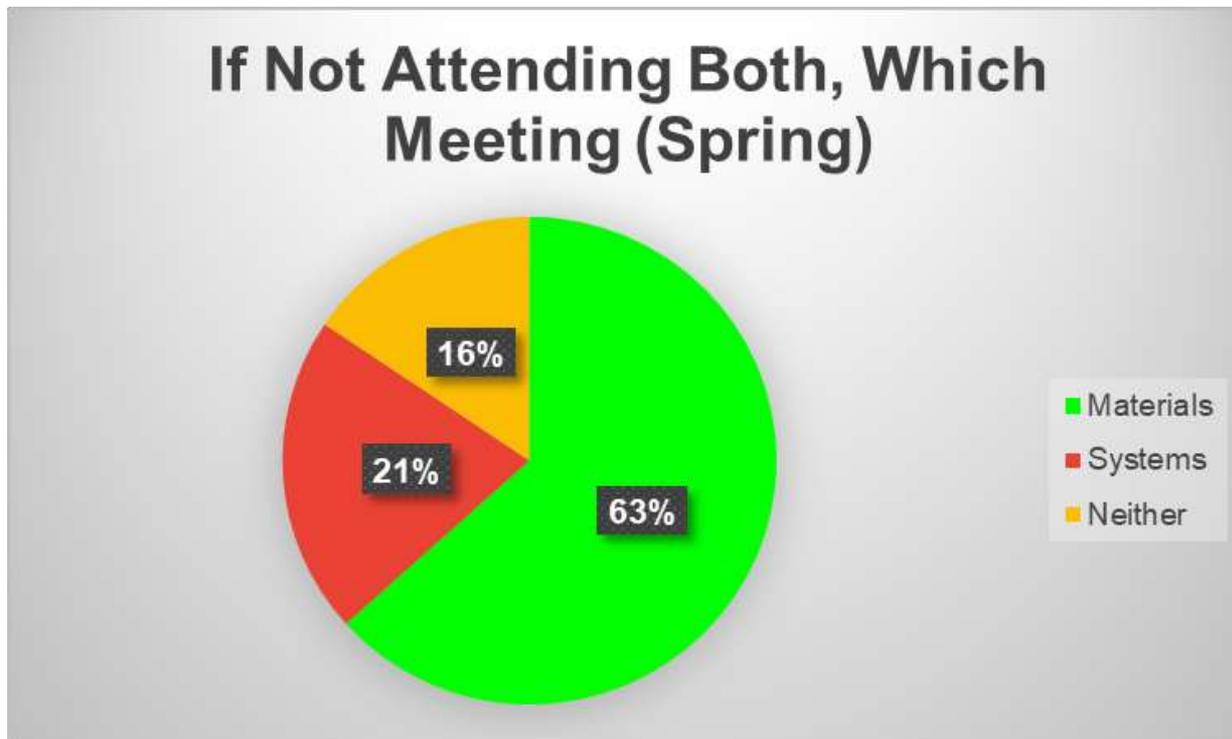
Question 5 (Abbreviated combined Materials/Systems Meeting, would you attend)

The Materials Forum has traditionally conducted 3 meetings annually, while the Systems Forum has conducted 2. In an effort to further coordinate the output of both meetings, the FAA is considering conducting an abbreviated Spring meeting in the February time frame. The meeting would not involve Task Groups, but rather a status update on targeted areas of each Forum. One option would be to conduct two 1-day meetings of each Forum. Given this proposed format, would you attend both meetings?



Materials and Systems Forum Meeting Questionnaire

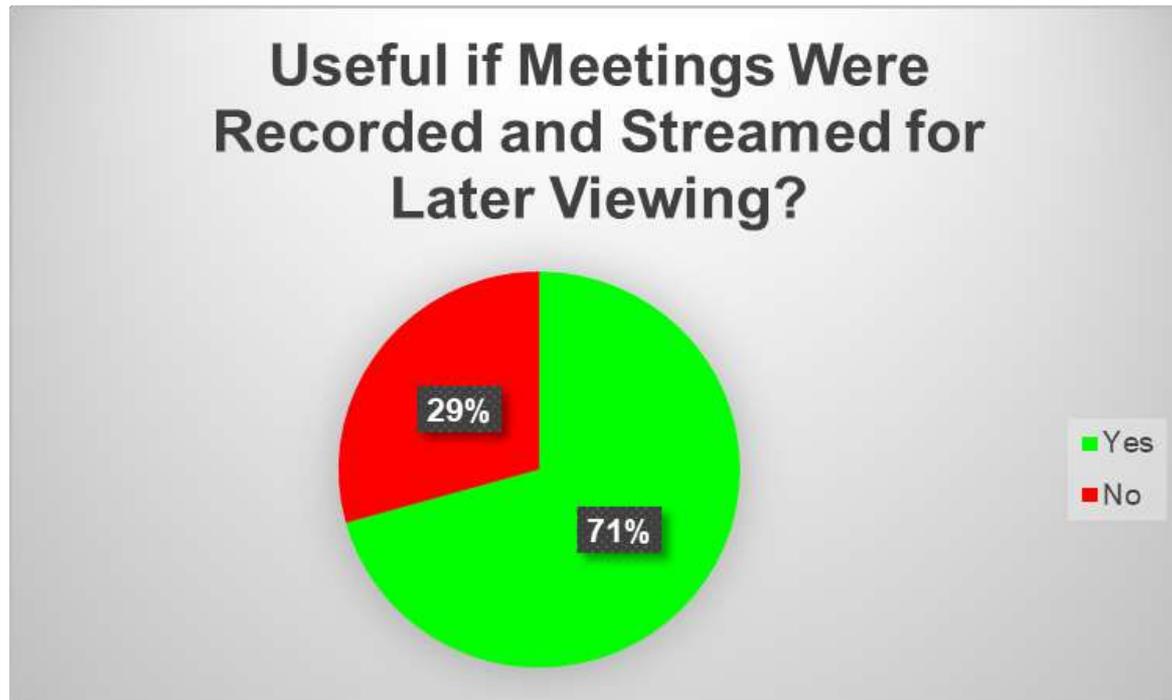
Question 5a (Which meeting would you attend if not both of combined Spring Materials/Systems Meeting)



Materials and Systems Forum Meeting Questionnaire

Question 6 (Would you find it useful...)

Would you find it useful if the Forum meetings were recorded and streamed online as a Webinar, and available for viewing later?



Materials and Systems Forum Meeting Questionnaire

Question 7 (Participate from home)

Would you participate from your home location in a live, real-time Webinar?



Materials and Systems Forum Meeting Questionnaire

Question 8 (Webinar Streaming at Meeting)



Materials and Systems Forum Meeting Questionnaire

Question 9 (Feedback)

Please provide any additional comments or feedback that will help improve the quality and experience of these meetings.

Comments overwhelmingly positive

Standard format of presentations, consistent title, identification of new vs historical data

Train speakers on use of microphone

Tables are very useful for taking notes, abundant outlets also helpful

A couple requests to move meeting back to Tropicana

Poll the attendees ahead of the meeting to better determine which Task Groups they plan to attend

Request meetings be 2 full days

Appendix F Updated in January

Centennial Aircraft Interiors, Inc.
7405 Peoria Street
Englewood, CO 80112
Phone: 303-649-9296
Website: www.centennialaircraft.com
Email: cenaircraft@aol.com
Contact: Dave Sharpnack

Chapters: 1*, 3*, 4*

J3 Aviation Solutions, Inc., d/b/a Blue
Flame Lab
600 PSI Drive, Suite 1
Boca Raton, FL 33431
Phone: 561-226-0105
Mobile: 561-302-6383
Contact: Arun Kapur
Email: arun@akaeroservices.com
Website: www.j3aviationsolutions.com

Chapters: 1*, 2*, 3*, 4*, 7*, 10*



Appendix F Updated in January

<p>LEFAE (Laboratoire d'essais feu aéronautiques et électriques) – Groupe EMITECH ZI-Stelytec – 2 Allée Isaac Newton 42400 Saint-Chamond France Phone: (33) 437 201 917 Fax: (33) 477 815 501 Website: www.lab-lefae.com Email: a.gutierrez@lab-lefae.com</p>	<p>Chapters: 1*, 2*, 3*, 4*, 5*, 6*, 7*, 8*, 11*, 12*, 13*, 14*, 18*, 20*, 24*</p>
<p>PAL Aerospace – Flammability Testing Services 7681 Highway 27, Unit 1, 2 and 3 Vaughan, Ontario Canada Phone: 905-405-1371 Email: PALFlammabilityTS@palaerospace.com Website: www.palaerospace.com</p>	<p>Chapters: 1*, 2*, 3*, 4*</p>

Appendix F Updated in January

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Website: www.warringtonfire.com

Chapters: 1*, 2*, 3*, 4*, 6*, 7*



Int'l Aircraft Systems Fire Protection Forum

Halon Replacement

Development of Minimum Performance Standards in 4 Areas:

Cargo Compartments

Engine Nacelles

Handheld Extinguishers

Lavatory Trash Extinguishers

Hazards of Lithium Batteries

Transportation as cargo; development of packaging standard

SAFO

Smoke Detection

Development of better standard for certifying cargo detection systems

Powerplant Fire Penetration Testing

Fuel Tank Flammability

Lavex Minimum Performance Standard Test



Lavex Minimum Performance Standard Test

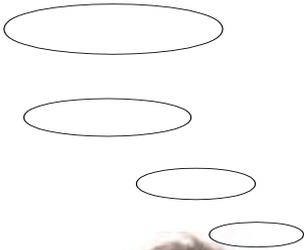


Lavex Minimum Performance Standard Test



OSU and HR2 Refinement Work

How can we make this better?



Research on Updating Heat Release Test (HR2)

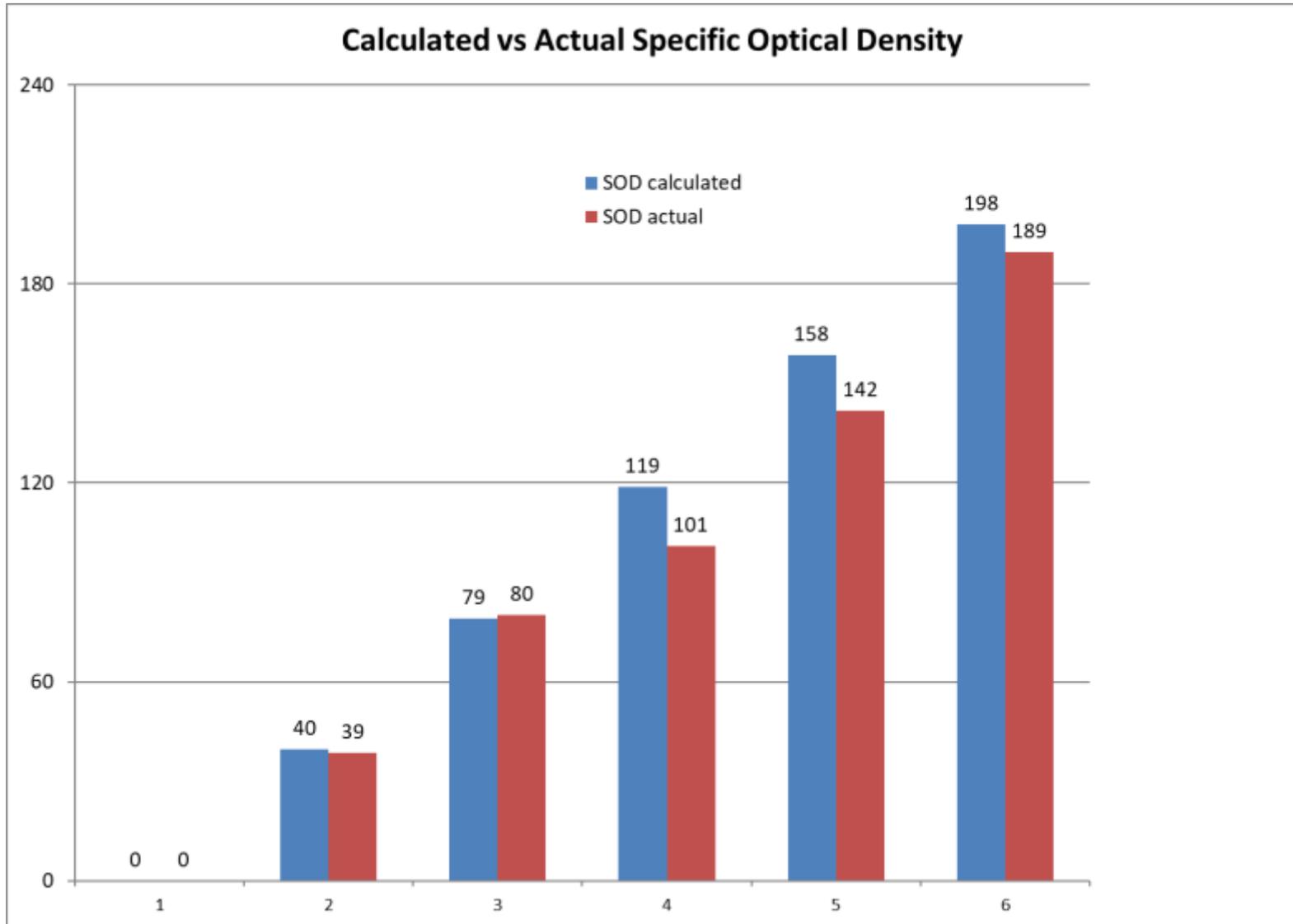
FAA + Industry Collaborative Effort

- *FAA HR2 apparatus has completed rigorous calibration trials (FAA/Marlin)*
Is a sonic choke + air regulator superior to mass flow controller?
- *TRL 5 completed; TRL6 (reproducibility) testing spooling up (FAA/Boeing/Airbus)*
- *Deatak HR2 apparatus now updated + voltage controller; good correlation with FAA HR2 (FAA/Deatak)*
- *Further refinement of non-intrusive (smooth) radiant heat source (FAA/Marlin)*

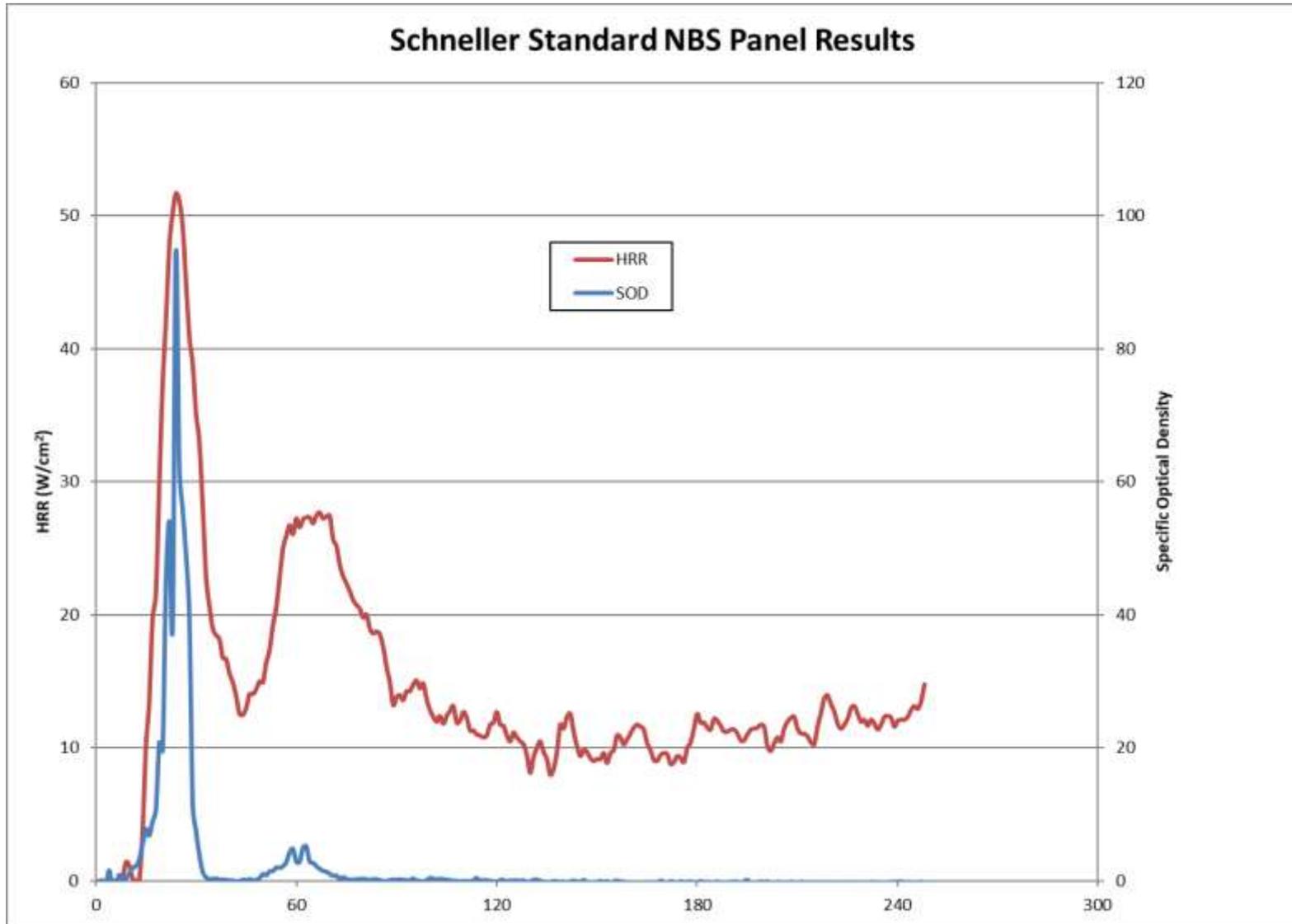
Measurement of Smoke in HR2



Measurement of Smoke in HR2



Measurement of Smoke in HR2



Questions?

